

Appl. No. 10/696,812
Examiner: James M Hewitt, Art Unit 3679
In response to the Office Action dated March 23, 2006

Date: June 23, 2006
Attorney Docket No. 10111396

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraphs beginning on page 1, line 29 of the specification as added in the amendment filed on July 6, 2005:

An object of the present invention is to provide an inflatable product including two chambers and an air pump for inflating and deflating the chambers.

In an embodiment of the invention, an inflatable product is provided. ~~The inflatable product includes~~ including a first chamber, an air pump, a first valve through which the air pump inflates and deflates the first chamber, and a first switch structure, connected to the first valve, wherein the first valve is mechanically opened by the first switch structure. The inflatable product further includes a second chamber, a second valve through which the air pump inflates and deflates the second chamber, and a second switch structure, connected to the second valve, wherein the second valve is mechanically opened by the second switch structure. The air pump has a first pair of electrodes and a second pair of electrodes, the air pump operating in a first direction for inflating air through the first or second valve when the first pair of electrodes contact each other, and operating in a second reverse direction opposite to the first direction for deflating air through the first or second valve when the second pair of electrodes contacts each other. The first switch structure and the second switch structure operate the pump by controlling the first pair of electrodes and the second pair of electrodes.

In another embodiment of the invention, an inflatable product is provided comprising a pack having a first vent opened and closed by a first valve, a second vent opened and closed by a second valve, and a third vent in communication with the ambient. A first chamber is provided in communication with the first vent, and a second chamber is provided in communication with the second vent. An air pump is provided for pumping air into the pack through the third vent when activated in a first direction, and out of the pack through the third vent when activated in a second direction. The inflatable product further includes a first switch structure movable between a first orientation and a second orientation, the first orientation opening the first valve and activating the air pump in the first direction to inflate the first chamber, and the second orientation closing the first valve. The inflatable product further includes a second switch structure movable between a third orientation and a fourth orientation, the third orientation opening the second valve and activating the air pump in the second

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direction to deflate the second chamber, and the fourth orientation closing the second valve. A driving element is provided for impelling the second switch structure out of the third orientation to the fourth orientation when the first switch structure is moved to the first orientation while the second switch structure is in the third orientation, such that the first and second switch structures cannot be respectively in the first and third orientations simultaneously. Preferably, the driving element also impels the first switch structure out of the first orientation to the second orientation when the second switch structure is moved to the third orientation while the first switch structure is in the first orientation, such that the first and second switch structures cannot be respectively in the first and third orientations simultaneously.

In a preferred embodiment, the first switch structure is further movable to a fifth orientation, the fifth orientation opening the first valve and activating the air pump in the second direction to deflate the first chamber, and the second switch structure is further movable to a sixth orientation, the sixth orientation opening the second valve and activating the air pump in the first direction to inflate the second chamber. In this embodiment, the driving element preferably impels the second switch structure out of the sixth orientation to the fourth orientation when the first switch structure is moved to the fifth orientation while the second switch structure is in the sixth orientation, such that the first and second switch structures cannot be respectively in the fifth and sixth orientations simultaneously. The driving element may also impel the first switch structure out of the fifth orientation to the second orientation when the second switch structure is moved to the sixth orientation while the first switch structure is in the fifth orientation, such that the first and second switch structures cannot be respectively in the fifth and sixth orientations simultaneously.